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SERIAL NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.
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EXAMINER	
LEE, J	
ART UNIT	PAPER NUMBER
251	3

DATE MAILED: 08/23/88

This is a communication from the examiner in charge of your application.

COMMISSIONER OF PATENTS AND TRADEMARKS

☑ This application has been examined ☐ Responsive to communication filed on _____ ☐ This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), ~~_____ days~~ from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

1. ☑ Notice of References Cited by Examiner, PTO-892.
2. ☐ Notice re Patent Drawing, PTO-948.
3. ☐ Notice of Art Cited by Applicant, PTO-1449
4. ☐ Notice of informal Patent Application, Form PTO-152
5. ☐ Information on How to Effect Drawing Changes, PTO-1474
6. ☐ _____

Part II SUMMARY OF ACTION

1. ☑ Claims 18-32 are pending in the application.
   Of the above, claims _____ are withdrawn from consideration.
2. ☑ Claims 1-17 have been cancelled.
3. ☐ Claims _____ are allowed.
4. ☑ Claims 18-32 are rejected.
5. ☐ Claims _____ are objected to.
6. ☐ Claims _____ are subject to restriction or election requirement.
7. ☐ This application has been filed with informal drawings which are acceptable for examination purposes until such time as allowable subject matter is indicated.
8. ☐ Allowable subject matter having been indicated, formal drawings are required in response to this Office action.
9. ☐ The corrected or substitute drawings have been received on _____. These drawings are ☐ acceptable; ☐ not acceptable (see explanation).
10. ☐ The ☐ proposed drawing correction and/or the ☐ proposed additional or substitute sheet(s) of drawings, filed on _____ has (have) been ☐ approved by the examiner. ☐ disapproved by the examiner (see explanation).
11. ☐ The proposed drawing correction, filed _____, has been ☐ approved. ☐ disapproved (see explanation). However, the Patent and Trademark Office no longer makes drawing changes. It is now applicant's responsibility to ensure that the drawings are corrected. Corrections MUST be effected in accordance with the instructions set forth on the attached letter "INFORMATION ON HOW TO EFFECT DRAWING CHANGES", PTO-1474.
12. ☐ Acknowledgment is made of the claim for priority under 35 U.S.C. 119. The certified copy has ☐ been received ☐ not been received ☐ been filed in parent application, serial no. _____; filed on _____.
13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.
14. ☑ Other Preliminary amendment has been entered.

The disclosure is objected to because of the following informalities:

On page 6, line 23, "Figure 11 is a" should actually read --Figures 11a and 11b are--. In the same line, "diagram" should be --diagrams--. On page 8, lines 19 and 20, the phrase "to a maximum at the edges of the blocks 16A and 16B, respectively," is redundant and should be deleted. On page 16, line 33, "12D" should actually be --12B--. On page 17, line 15, "42" should be --44--. On page 20, line 10, "dp" should be --dB--. On page 23, line 15, "sources 50, 52" should actually be --sources 42, 48--; and on the same page, line 34, "protons" should be --photons--.

Appropriate correction of the disclosure is required.

Claims 25-32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. In the first line of each of claims 25-27, the word "system" should be deleted since base claim 24 recites an "amplifier" and not a "system". In the following locations the word "signals" (plural) should be changed to --signal-- (singular): claim 25, line 5; claim 25, line 9; claim 26, line 3; and claim 27, line 5. The term "the frequency of said light signal" in claim 28, line 8, is misleading because the light signal was not previously defined as being a single frequency! Claims 29-31, being

dependent upon claim 28, are indefinite for the same reason. In claim 31, lines 4-5, there is no antecedent basis for "said crystal fiber". In claim 32, line 6, "wavelength" (singular) should actually be --wavelengths-- (plural).

Claims 18-32 are rejected under 35 U.S.C. 112, first paragraph, as the disclosure is enabling only for claims limited to an amplifier wherein the "laser fiber" comprises a crystal (e.g. a ND:YAG crystal). See MPEP 706.03(n) and 706.03(z). By deleting the limitation of a "crystal" fiber, the scope of the claims far exceeds that of the specification and there is no enablement for these claims. In other words, the enablement is not commensurate in scope with the claims, and the claims thus fall short of the requirements of the first paragraph of 35 USC 112. The specification is consistent throughout in requiring a crystalline ND:YAG laser fiber to be used, and the examiner can find no instance where more freeedom in selecting the laser fiber is set forth.

Claim 32 is also rejected under 35 U.S.C. 112, first paragraph, as the disclosure is enabling only for claims limited to the use of particular wavelengths rather than wavelength "spectra". See MPEP 706.03(n) and 706.03(z). As above, although the specification is enabling, the enablement is not commensurate in scope with this claim. The Examiner can find no reference in

the specification to a laser fiber which emits light in a "spectrum" of wavelengths, or to the laser fiber being pumped by a "spectrum" of wavelengths. All references are consistently to single selected wavelengths.

Because of the nature of the fundamental problems with the claims of this application (above), any analysis of obviousness type double patenting problems must await resolution of the "scope of claims" situation. The Examiner has, however, determined that there are no same invention type double patenting problems in this application.

The prior art made of record and not relied upon is considered pertinent to applicants' disclosure.

With the exception of U.S. Patent 4,723,824, all of tne prior art cited on attached forms PTO-892 was thoroughly discussed during the prosecution of parent applications Serial Nos. 554,888 and 930,136. This prior art remains relevant for all the reasons developed during said prosecution. U.S. Patent 4,723,824 has matured from parent application Serial No. 930,136. No copies of any of the cited prior art are included with this Office action.

Any inquiry concerning this communication should be directed to Examiner John D. Lee at telephone number 703-557-4707.

8/17/88 srh

John D. Lee

JOHN D. LEE
PRIMARY PATENT EXAMINER
GROUP ART UNIT 251